Richmond Birdwing (male)
(*Ornithoptera richmondia*)

Butterfly & Other Invertebrates Club Inc. Newsletter

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CLUB PLANNING AND ORGANIZING GROUP - 2002

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PLANNING AND ORGANIZATION MEETINGS

A quarterly meeting is scheduled in order to plan club activities and the newsletter. See BOIC Programme.

CONTACT ADDRESS

PO Box 2113, Runcorn 4113, Queensland

AIMS OF ORGANIZATION

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organize excursions around the theme of invertebrates e.g. butterflies, fireflies, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

NEWSLETTER DEADLINES

If you want to submit an item for publication the following deadlines apply:

March issue – February 21st
June issue – May 21st
September issue – August 21st
December issue – November 21st

COVER DRAWING

Richmond Birdwing (*Ornithoptera richmondia*) drawing by Lois Hughes

PRESIDENT'S POSTING

Thanks to the consistent hard work of Daphne Bowden and the various authors of articles this newsletter has appeared for the 28th time. Over recent months our Club has become increasingly successful at spreading information about butterflies and their host plants. This has been brought about through the publication of a series of small booklets, two of which, "Butterfly Gardening" and "Grow More Butterflies" were compiled from past newsletter articles. The third, "Butterfly Host Plants of SEQ and Northern NSW", was compiled by John Moss with the input of many people and sources. Please consider these publications if you're thinking about a small gift. Thanks goes to these people and all the other hard working members of our Club, particularly in the lead up to our AGM to be held on the 12th April. We'd really appreciate seeing our Club members there. You may also like to consider becoming involved in the Planning Committee for the Club. This involves a quarterly meeting and lots of interesting shared information.

We've also got a few other things that people are becoming involved with. One of these is a move to have the restriction on obtaining caterpillars of the Richmond Birdwing removed. Many people have been involved with planting vines and the restrictions are now preventing further community input. Another is based at Yugarupul Park where people are trying to identify appropriate species of butterflies and ants to enhance the biodiversity offered by plants with mistletoes on them. Find out more inside.

Helen Schwencke

IN THIS ISSUE

Presidents Posting 3
Creature Feature - Richmond Birdwing 4
Plant Profile - *Pararistolochia praevenosa* 5
Creature Note - Silver-striped Hawk Moth 6
Excursion Reports - Coombabah Creek, Gold Coast 7
Ross Kendalls' Butterfly House 8
Report - Visit by Japanese Butterfly Expert 9
More Host Plants for You - *Alphitonia petriei* 10
Raising Orchard Swallowtails on Boronia 11
Host Plants of Mt. Coot-tha 13
Managing Mistletoes Part 1 16
Legalise the Birdwing Butterfly 17
The Columbus Hypothesis 18
Requests 20
Merchandise available from BOIC 20
Butterfly and Other Invertebrates Club Programme 23

The following article features one of the Swallowtail Butterflies shown on our Poster, Lifecycles of the Swallowtail Butterflies of S.E. Queensland. The poster can be obtained from BOIC, PO Box 2113, Runcorn, 4113. The cost for members is $6 plus $5 postage and handling, non-members $10 plus $5 postage and handling.

Richmond Birdwing (*Ornithoptera richmondia*)

I have purposely not written about this magnificent insect previously, mainly because of the amount of information that has already been published about it, but its beauty is such that to not include it in any publication would be unthinkable.

It can be found on the wing mainly during the months of September to May, and to see it for the first time is a very memorable experience.

Just the size alone is enough to leave a lot of people in awe. It is one of the largest butterflies to be found in Southeast Queensland, having a wingspan of up to 115mm.

The wingspan of the male is approximately 105mm. Its colour is iridescent green on the upper wings, with a large patch of black on the forewing and up to four black and three gold spots on the hindwing.

Richmond Birdwing adult and larva

The underside is slightly more spectacular. Once again the main colour is iridescent green, but the hindwings have an iridescent gold band which runs around its outer edge. A series of black lines and spots complete the wing patterns, but as if that isn't enough, the thorax of this insect is velvety black with a bright red patch on either side. This is then contrasted by a bright yellow abdomen.

The female, although not as spectacular in colour, is just as magnificent in flight. The wingspan is approximately 115mm. The main colour is blackish-brown with cream markings and a yellowish band on the outer edge of the hindwings on both the upper and undersides. The body is a dark caramel colour with distinctive red patches on the thorax.

The eggs are laid singly, on the underside of the leaves, mostly on the new growth.

The larvae are black on emergence, turning a caramel, maroon later and then either a blackish- brown or brownish-grey toward the final instars. They have rows of non irritating spines, all except four being the same colour as the body. These four are yellow to white.

The pupae, approximately 40mm. long is green with yellow patches on its back and is always found suspended by its tail and a central silken girdle in a head-up attitude.

The hostplants for this butterfly are *Pararistolochia laheyana* and *Pararistolochia praevenosa*, the latter being the main plant in the Maleny area.

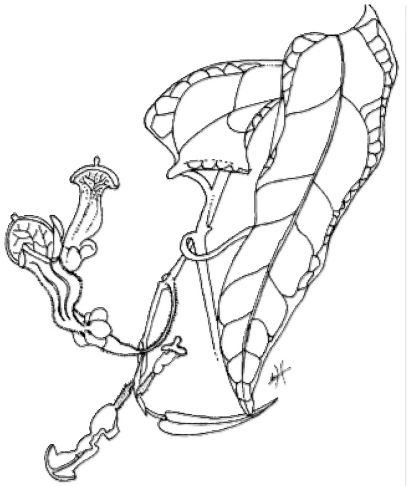
Further information can be obtained by reading *"Butterflies of Australia, their identification, biology and distribution"* by Michael F. Braby, 2000.

Bob Miller

PLANT PROFILE

RICHMOND BIRDWING VINE *(Pararistolochia praevenosa)*

HOST BUTTERFLY: Richmond Birdwing *(Ornithoptera richmondia).*



Richmond Birdwing Vine
(Pararistolochia praevenosa)

HEIGHT: I have seen this vine so prolific that it has climbed to the top of the tallest rainforest tree and then reach across a creek to continue growing on the other side.

SHAPE: A very healthy vine will have many stems growing away from the main vine, sometimes forming an impenetrable wall of vine.

GROWTH AND FEATURES: Sometimes this plant is very slow to start. I have found that if you plant one as an understorey plant in an area of complete canopy cover and supply it with a piece of twine to grow up, it will not take long to reach the canopy. The section of vine in full sunshine should flower and set seed freely, provided you have the small pollinating midge that lives in the leaf litter. The small but distinctive pipe-shaped flower has a yellowish to reddish-brown throat.

FERTILIZER: As with all of my native plants, I prefer to fertilize with one of the processed chicken manures now readily available at most supermarkets and nurseries. Just add a handful every couple of months and then re-cover it with mulch.

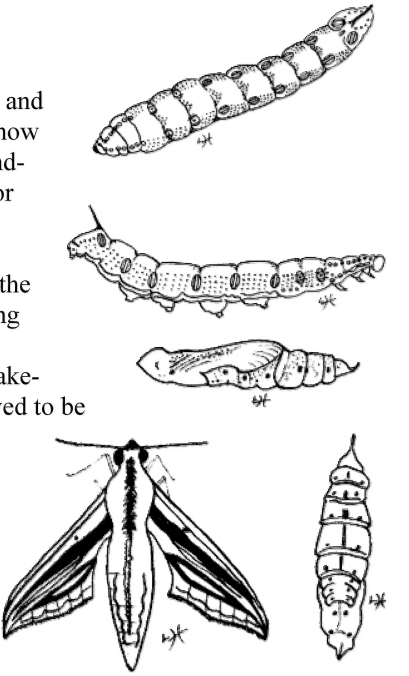
WHY WAS THIS PLANT CHOSEN?: ***For the lowland areas of South-East Queensland and northern New South Wales up to a height of approximately 600mts. above sea level, this is the main hostplant for this magnificent insect.***

Bob Miller

CREATURE NOTE

Silver-striped Hawk Moth (*Theretra oldenlandiae firmata*)

During an early morning search around the paddocks and garden, collecting some last minute specimens for "show and tell" (to add to my already large collection of hand-reared Dainty and Orchard Swallowtail caterpillars for our Club display at Turners Nursery last February) a stunning large black caterpillar caught my eye.
It had obviously come from the Balsams, judging by the defoliation of the plants in the vicinity, and was resting on a vine. More searching produced another slightly smaller specimen and these were placed in a plastic take-away food container with Balsam leaves. These proved to be of great interest to visitors to our display. People, children and adults alike, are fascinated by the colours, patterns, shapes and sizes of the various butterfly and moth species and the incredible colour and pattern changes some go through during their numerous instars (or skin changes).



Hawk Moth larvae, pupae and adult

The body colour was rich, velvety black, sprinkled with creamy gold dots. A band of gold dots extended along each side from the tail end towards the head and reducing to 2 single lines from the last thoracic section to the head. These were interrupted at each segment by brilliantly coloured circles, eight in number, along each side. The colours and patterns of these spots varied. The first two pairs had a central black dot surrounded by an orange circle bisected by black lines, a quarter moon shape of blue completing the design on either side.

The central area of the 6 following pairs, shaded from deep maroon to light orange and was bisected by a broad black line wither side, then bluish purple, all encircled with black. Across the back, between the dots, were crescent shapes of cream dots. The pointed black tail was white tipped. A black head completed this spectacular caterpillar. It measured 6 cm compressed but at full stretch would have been 8cm.

This pair had the most voracious appetites of anything I have hand reared. Its no wonder they strip the plants bare seemingly overnight! What goes in one end must come out the other and it did in vast quantities!! Ironically I always line these containers with several sheets of toilet paper. It makes it easier to dispose of the frass and keep the containers clean.

The largest specimen pupated 3 days later, constructing a shelter between the toilet paper sheets. Overall the pupa was semi-transparent with a pinkish blush, black dots and about 4 cm long. A moth emerged some weeks later (I forgot to record when) and was easily identified as the Hawk Moth *Theretra oldenlandiae firmata*. It was neat and compact but unspectacular, brownish in colour, wings interspersed with pink and dark lines, its body lightly touched with gold, grey and silver hairs, with narrow, double, parallel, silver stripes running the length of the dorsum (top) of the abdomen. The second caterpillar pupated but nothing emerged.

Lois Hughes

EXCURSION REPORTS

Coombabah Creek and Paradise Point, Gold Coast, Sunday 19th January 2003

A beautiful sunny summer's day found us on the Gold Coast's Jabiru Island where Coombabah Creek joins the Coomera River. We arrived on the high tide and were taken by Carmen Burke and Doug White for a tour of the mangroves along a splendid boardwalk. As well as seeing 6 mangrove species we had the good fortune to see Cow Rays skimming over the sand and large mud crabs burrowing into the substrate.

The Lesser Wanderer, Swamp and Blue Tiger hostplant, *Cynanchum carnosum,* was present but no evidence was seen of larvae or chewings of these three butterflies.

Two species of mangrove cicada – White Drummer (*Arunta interclusa*) and Silver Knight (*Psaltoda plaga*) were very common if their noise output was anything to go by, and many Harlequin Bugs were seen on the Coastal Hibiscus (*Hibiscus tiliaceous*). As for mangrove butterflies, the only evidence was of old epidermal chewings of *Avicennia marina* leaves presumably by the Mangrove Jewel (*Hypochrysops epicurus*).

Closer to shore on a *Casuarina glauca* were found some "Pie-dish" beetles and a large spider-hunting wasp. A female *Psaltoda plaga* was found ovipositing on its branches.

We then drove to Carmen's street and walked via a park to the Coombabah Creek esplanade which revealed many more cicada species including large Cherry Noses (*Macrotristria angularis*), head down Floury Bakers (*Abricta curvicosta*), Paperbark cicadas (*Cicadetta hackeri*), Spotted Wattle Cicadas (*Cicadetta labeculata*), Bark Cicadas (*Pauropsalta corticinus*) and the small Red Squeaker (*Pauropsalta rubea*) with its familiar "dit-da-daah" song from the taller eucalypts.

As well as the plethora of cicadas, a few of the more common butterfly species were seen. These included Lemon Migrants, Common Crows and Lesser Wanderers.

Doug noticed and pointed out to us, the dragonfly *Hemicordulia australiae* flying in territorial pattern in open space between the trees. We then walked back to Carmen's for lunch, and a stroll in her crowded but fascinating garden completed the day for us all.

We thank Carmen for her hospitality.

John Moss

Ross Kendall's Butterfly House

After a week of solid but welcome rain, the Sunday morning of February 23rd dawned with clear skies, and we had a warm to hot sunny day for our visit to Ross' fascinating butterfly rearing complex.

The first thing that caught my eye were the shelters of the skipper butterfly *Hasora discolor* (Green Awl) on the leaves of the Burny Bean (*Mucuna gigantea*). The shelters, formed from rolling the edge of a leaf to the midline and fixing it with silk, are quite copious and the final instar larvae have plenty of room to move around. In addition that part of the leaf comprising the shelter was found to have a multitude of small holes like a salt shaker, the function of which could only be guessed at – ventilation being the most likely function.

On entering the "inner sanctum" or rearing room, we saw hundreds of larvae of half a dozen common species of butterflies in the process of devouring their respective hostplant. Small drawers housed pupae that had more than a few days to emerge, whilst wooden spring clothes pegs held on to the "tails" of those that were closer to eclosion.

Next we went out back to the enormous flight cage, measuring approximately 15m x 6 m x 4m high which had many species of hostplants, some in pots and some rooted in the ground. I will not attempt to list Ross' plant species in this report – it could

certainly be the subject of a separate article, and far more accurate if detailed by the maestro himself!

Suffice it to say that there were dozens of butterflies on the wing including Lemon and Yellow Migrants, Large (=Common) Grass-yellows, Common Crows, Common Eggflies, Chequered, Dainty and Orchard Swallowtails, Monarchs and Lesser Wanderers. There may have been others which I missed.

Most interesting and spectacular were the final instar larvae and pupae of the Cairns Birdwings on the Tagala vine (*Aristolochia acuminata*).

To escape the heat we retreated back to Ross' ground floor "cool room" where a lively discussion took place, hostplants/seeds exchanged and some booklets and posters purchased.

Those of us that wanted to continue with the excitement left Ross' in a small convoy of cars and drove to a nearby street, lined with exotic Crepe Myrtle (*Lagerstroemia indica*) and Pongamia (*Millettia pinnata*) trees. The latter are host to the Chrome Awl skipper (*Hasora chromus*) of which we saw several in flight around the treetops.

However, the main reason we sought out this site was to find larvae of the pretty Diggles' or Silky Jewel (*Hypochrysops digglesii*) which we had seen previously on *Dendrophthoe vitellina* mistletoe (=Yellow-flowering Mistletoe) parasitising the Crepe Myrtles.

We soon found several, with their attendant ants (*Crematogaster* sp.) in shelters formed by partly eaten curled leaves of the host mistletoe. Each larva had up to a dozen ants in attendance, which were walking around and on top of each larva in their quest for the sugary secretions, making it difficult for us to actually visualize the larva itself.

An unexpected bonus for the day was the sudden appearance of a female Purple Azure butterfly (*Ogyris zozine*) which flew into the Dendrophthoe Mistletoe on an adjoining Crepe Myrtle and commenced egg laying at the base of the plant near the haustorium (mistletoe attachment site).

This was most interesting as few of us had seen the butterfly on the wing and even fewer seen the process of oviposition. Quite an exciting finale for a successful BOIC excursion. We thank Ross and Lilac for their generous hospitality.

John Moss

REPORT

Butterfly expert from Japan guest of BOIC members

In November 2002, we were privileged to host the visit from Japan of Makoto Nakae, a papilionid butterfly authority. As well as having an extensive collection of world

Swallowtail butterflies, Makoto is currently putting finishing touches to a pictorial book on the subject of Swallowtails and related species. He hopes to have illustrated every world species, and one of the reasons for his Australian visit was to collect and photograph the Four-barred Swordtail (*Protographium leosthenes*), a species not often seen in Japanese collections.

Several BOIC members including Ross Kendall, Steven Kerkow, Cory Dale, John Nielsen and the writer were able to escort Makoto to various sites around south-east Queensland where Zig-zag Vine or Rauwenhoffia (*Melodorum leichhardtii*) – the Swordtail's hostplant – was known to be growing.

Right on cue, at a site in the Imbil State Forest near Borumba Dam, the butterfly put in an appearance and an excited Makoto was able to secure a perfect specimen for illustrating in his book.

Makoto was also delighted to observe at other venues some of our other more interesting local butterflies such as the Satin Azure (*Ogyris amaryllis*), Purple Azure (*Ogyris zozine*) and in particular the Richmond Birdwing (*Ornithoptera richmondia*) which was seen in the spectacular setting of the Mt. Warning National Park near Murwillumbah.

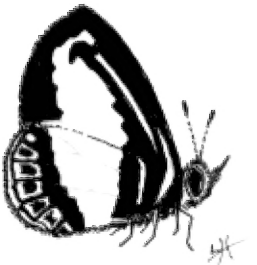
As well as some of our local butterfly species, Makoto was able to take back to Japan about 180 specimens of approximately 50 species of our cicada fauna and a copy of Max Moulds cicada book. The cicada specimens have since been donated for a permanent display at the Kitakyusha Museum (? in Osaka).

John Moss

MORE HOST PLANTS FOR YOU

Pink Ash, Sarsaparilla *Alphitonia petriei* (fam. Rhamnaceae)

The Pink Ash, *Alphitonia petriei*, is a very fast growing, 'pioneer' species commonly found in rainforest regrowth and where land disturbance has occurred between Iron Range in north Queensland to northern New South Wales. Flowers are white masses on the tips of branches occurring in spring. In sunny situations, Pink Ash can be quite spreading (up to about 6m) with the large attractive and mildly hairy grey/green leaves layered on branches. It is one of two hostplants of the Small Green-banded Blue butterfly, *Psychonotis caelius* (Lycaenidae), as well as producing small, hard fruit which are very attractive to Rosellas and King Parrots. Insectivorous birds are also drawn to this tree due to the large number and variety of insects which often



Small Green-banded Blue

transform its leaves into lace work. Being very adaptable to soil type and fertility, and full sun, it is capable of growing 3m a year to a height of about 10m under average garden conditions.

I planted *Alphitonia petriei* and *Alphitonia excelsa* (Red Ash, a more common host to the Small Green-banded Blue) from tube stock at the same time, within 15m of each other in red, clay schist soil in the west of Brisbane. Both species were quick growing but Pink Ash was much more prone to hot, dry conditions than red ash, and required a thick layer of mulching around its base and regular watering during drought conditions. However, once established, *Alphitonia petriei* grew at a considerably faster rate than *Alphitonia excelsa* and was clearly the more attractive hostplant as far as the Small Green-banded Blue was concerned. Even during the coolest winter days, these butterflies were commonly seen flying in and around the Pink Ash, sometimes laying eggs, and often perching on the few sunny patches on the host or adjacent trees. Butterflies were much less commonly seen near the Red Ash although immature stages were found feeding on it as well. The Small Green-banded Blue lays its eggs singly or in pairs on the pale, felt-like underside of the leaves, where well camouflaged caterpillars feed and ultimately pupate.

Despite being a very ornamental shade tree, pink ash's tendency to be heavily attacked by a multitude of insects tends to reduce its attractiveness in the garden. However, if grown in full sun and given plenty of extra water and nutrients, it should recover itself quickly after such damage. Generally though, Pink Ash is a quick growing wildlife tree and host of the Small Green-banded Blue suitable for mixed butterfly host species plantings.

Pink Ash, *Alphitonia petriei*, may be purchased from the following nurseries depending on availability:
Greening Australia, 57 Paton Rd, The Gap Qld 4061 ph. 3300 6304
Bunyaville Forestry Nursery, Old Northern Road, Everton Hills Qld 4053
ph. 3353 1770
Barung Landcare Nursery, 17 Bicentenary Lane, Maleny Qld. 4552 ph. 5494 3151

James Beale

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Natural History Account

Raising Orchard Butterflies on Boronia

Immediately after graduating university in 1993 with a Leisure Management degree, I was employed as one of the Rangers working for Kingfisher Bay on Fraser Island. The Manager of the Rangers Department who was my boss at the time had a degree in Zoology and encouraged my yearning for experience with all things nature. I found one of the easiest groups of animals to survey and identify were the butterflies, which all seemed to have beautiful and distinctive markings (I was leaving the ants to

others…). I spent the next three years on Fraser Island in the same workplace, gradually expanding my knowledge base, and catching, identifying and releasing most butterflies.

In both the summers of 94/95 and 95/96, I was developing a small collection of pinned specimens that I had caught from around the resort property. I soon discovered that the perfect pinned specimen could usually only be obtained by raising the caterpillars by hand, and keeping the best example after metamorphosis for the jar. Most of the butterflies I had chased down with net in hand were not of this caliber, and it saved me the public comedy spectacle of running, like a lunatic Monty Python extra, through crowds of curious onlookers. I had successful raising experiences with several easily-obtained caterpillars from around the resort property.

There is a remarkable diversity of vegetation on the sand islands off Queensland's coastline, with Fraser Island home to spectacular wildlflower heathlands on some of the older dune systems. The western foreshore has many swamps and wetlands close to water table conditions, or adjacent to streams and the lower sections of the creeks. Here a beautiful wildflower by the name of Wide Bay Boronia (*Boronia rivularis*) may be found. It sticks in the memory not only for the fact that I used it to raise caterpillars, but the sensational sarsaparilla smell that is emitted when the leaves are crushed. I used it often on my interpretive walks as a guide on the Kingfisher Bay property.

One butterfly that I was particularly fond of was the Orchard Butterfly (*Papilio aegeus*), and I would often see the small 'bird dropping' caterpillars of this species on *Boronia rivularis*. I was yet to obtain a perfect pinning specimen, so collected about ten caterpillars and the foliage they were sitting on, and raised them to chrysalis stage by giving them fresh foliage that I collected every day I worked. I cannot remember how long this process took, but I pinned the chrysalises to the curtain rail inside the Ranger's Office, and they served as a valuable interpretive display with accompanying temporary signage. As they hatched and hung their wings to dry, they were released, with only the last one kept as a specimen. After all of that collection and patience, one of the rangers who was collecting other insect families, threw a Preying Mantid in the same killing jar, which tore apart my perfect specimen before it passed away. If the jar was bigger that day, I'm sure I would have squeezed all three of them in there!!

The next season (95/96) I obtained my perfect specimen, which I still have pinned in a display cabinet at home to this day. In the last six years working for Couran Cove Island Resort on South Stradbroke Island, I have seen them frequently on another member of the Rutaceae family, Sandfly Bush (*Zieria smithii*), and sometimes on the wild lemon trees (*Citrus limon*) that are a leftover from early farming days.

Scott Toohey **scottt@couran-cove.com.au**
Environmental Programmes Manager, Couran Cove Island Resort

Butterfly host plants of Mt Coot-tha

Mt Coot-tha is a well-known Brisbane landmark. Charles McCubbin immortalised the Mt Coot-tha lookout in his book 'Australian Butterflies'. He writes "this species (*Hypolimnas bolina*) is very common in Brisbane, and my illustration shows the butterflies with their food-plant, *Sida rombifolia*, against that splendid example of 'council baroque' which graces the summit of Mount Coot-tha."

However most visitors are not aware that the hill is actually named after an insect, a native bee. "There were two kinds of native honey. One called 'kabbai' was pure white and very sweet, and was found always in small, dead, hollow trees. 'Ku-ta' was dark honey, of a somewhat sour taste, and might be found in any kind of tree; it was much more plentiful than the other. My father gave the latter name to the Government for the hill near One-tree Hill, as in the old days that was a great place for native honey, and it has been mispronounced and spelt Coot-tha." So wrote Constance Petrie on page 77 in her book Tom Petrie's Reminiscences of early Queensland. Interestingly, both species of native stingless honeybees are still known in the general area, one common and the other rare.

Another reason Mt Coot-tha is important to insects is that it is one of the places where the behaviour known as hill-topping occurs. Some butterflies are well known for this behaviour, however, other insects such as flies and dragonflies also hill-top.

There are many walking tracks on the hill though you would need to be quite fit and nimble for some of them. What follows is a small selection of the butterfly host plants that you may be able to spot if you do decide to try them out.

There are two species of rice-flower on Mt Coot-tha, *Pimelea linifolia* in the open forest and *Pimelea latifolia* in a few of the shady gullies. Both are hosts for the Yellow-spotted Blue (*Candalides xanthospilos*). The first-named, Slender Riceflower, is one of those plants that is fire adapted and so tends to disappear over time in suburbia. Its seeds are also difficult to germinate. This is a pity as it is a very attractive wildflower.

The Cressida Pipeflower (*Aristolochia* sp. D'aguilar Range) is a common though usually overlooked small vine creeping through the grass. The easiest way to find it is to closely observe any female Clearwing Swallowtails (*Cressida cressida*) as they go about laying their orange eggs. When there are lots of caterpillars most of the vines get eaten and they are difficult to find.

Dodder (*Cassytha filiformis*) is an unusual parasitic plant which is usually found trailing through the grasses, lomandras and small shrubs. It is leafless and has small suckers called haustoria which attach it to its host plants. Small white berries provide a welcome snack for small birds. At night, small green slug-like caterpillars of the Small Dusky-blue (*Candalides erinus*) butterfly feed on the twining stems. The small

whitish blue butterflies are one of the few butterflies that are common in dry eucalypt forests. Twin black spots on the underside of the forewing, seen when the wings are closed, make it easy to identify this butterfly.

Tephrosia (*Tephrosia rufula*) is a small shrub with pink pea flowers. It is a host for the Purple Cerulean (*Jamides phaseli*) butterfly. Once again there is a small green slug-like caterpillar.

Indigofera hirsuta is a bushy herb with orange-pink pea flowers. The leaves are slightly hairy. I did not know that this plant grew on Mt Coot-tha until I saw its associated butterfly flying around on the ridge that is my favourite spot for skink watching. The Jewelled Grass-blue (*Freyeria putli*) is one of Australia's smallest butterflies and when it stopped sipping nectar from the yellow wood sorrel (*Oxalis* sp.) flowers it led me to a few of its host plants in amongst the grasses.

Fishbone Cassia (*Chaemachrista nomame*) is a small herb with yellow flowers and looks like a small cassia. Its seeds germinate best after fire and this is the time when the plant is most common. The green caterpillars of the No-brand Grass-yellow (*Eurema brigitta*) feed on the leaves. Sometimes the empty carcass of a caterpillar surrounded by many tiny white cocoons will catch your eye and lead you to this plant. This is the result of a common parasite of this butterfly, a tiny wasp.

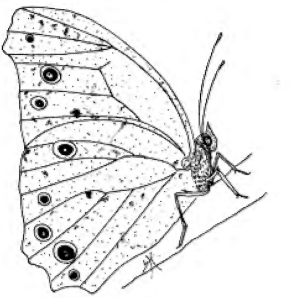
Leafwing (*Doleschallia bisaltide*) on *Pseuderanthemum variabile*

Love Flower (*Pseuderanthemum variabile*) is a delightful small herb with flowers that vary from white to pink to purple. Some forms are an attractive purple on the underside of their leaves while others have attractive white patterns on the upperside. In moister areas it becomes larger and sometimes forms an extensive groundcover. Leafwing (*Doleschallia bisaltide*) butterflies lay their eggs on the flower buds and when they hatch they eat the leaves. The spiky caterpillars grow to a large size and must sometimes travel long distances to the next plant to find enough leaves to complete their development.

Scleria mackaviensis is a small grass-like sedge with dark green leaves. It is the host of the Wide-brand Sedge-skipper (*Hesperilla crypsigramma*). There are many other

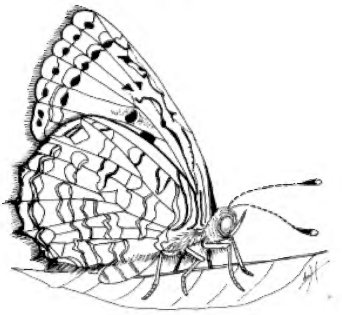
skippers breeding on Mt Coot-tha and utilizing a variety of grasses, sedges and lomandras.

Kangaroo grass (*Themeda triandra*) is common and is one of the hosts for the Evening Brown (*Melanitis leda*). This butterfly is the one that looks like a leaf and is often flushed out of the grass when walking along the tracks. I still remember the place on Mt Coot-tha where I first saw its two-horned green caterpillars feeding on Kangaroo grass. The caterpillars of the Orange Ringlet (*Hypocysta adiante*) are also said to feed on this grass but so far I have never seen its caterpillars in the wild , probably because they feed at night.



Evening Brown (*Melanitis leda*).

Monkey Rope (*Parsonsia straminea*) can grow into a large vine. It has opposite leaves and bunches of small yellow flowers. These flowers are an important year round nectar source for a large variety of insects such as beetles, wasps, bees etc. The Common Crow (*Euploea core*) caterpillars feed on the leaves of this vine and also on the closely related Brisbane Parsonsia (*Parsonia brisbanensis*) which has white flowers and is also found on Mt Coot-tha.



Fiery Jewel (*Hypochrysops ignitus*)

Mt Cootha is also home to many different species of native ants and some of these are vital protectors of some types of butterfly caterpillars. The Fiery Jewel (*Hypochrysops ignitus*) and the Common Imperial Hairstreak (*Jalmenus evagorus*) are two whose associated ants can be found there. The caterpillars feed on a wide range of plants including wattles (*Acacia* sp.) as long as the ants are present. The ant that looks after the Fiery Jewel is called the Coconut Ant (*Papyrius* sp.) because it smells of coconut.

I haven't yet been able to find any plants of Rusty Pomaderris (*Pomaderris ferruginea*), though it was recorded at the base of Mt Coot-tha in the 1980s, which place is now a typical suburban street. The Yellow Jewel (*Hypochrysops byzos*) whose caterpillars feed on the plant was last recorded in Brisbane at Mt Gravatt in 1901. I haven't found any *Pomaderris* there either, though it would have had to occur there for the butterfly to have been present.

Another plant that has long disappeared from the Mt Coot-tha area is Arrowhead Violet (*Viola betonicifolia*). Herbarium records show it at One Tree Hill in 1887 and

1914. The Fritillary butterfly (*Argyreus hyperbius*) whose caterpillars feed on this violet was recorded at nearby Indooroopilly in 1916.

It is sad to think of what has been lost from Mt Coot-tha in the past but there are still many plants and animals which are not only surviving but thriving. Large areas of bushland are especially important for those species that are unable to survive in suburbia, such as fire adapted plants like the Slender Riceflower, plants with unusual habits like Dodder, or many species of unusual ants. The great variety of invertebrates also provide food for birds and small animals, and Mt Coot-tha especially is quite rich in many species of lizards not found in suburbia.

Arrowhead violet (*Viola betonicifolia*)

Mt Coot-tha is also home to Brisbane's TV transmitter towers. So, next time you're at home watching TV let your thoughts travel back along the signal to Mt Coot-tha and wander over the mountain like the butterflies that still live there. Your brain will thank you for it!

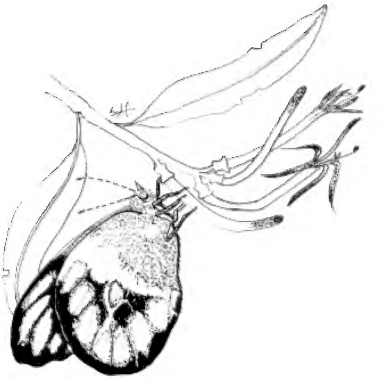
Frank Jordan

ARTICLES OF INTEREST

Managing mistletoes - Part One

Mistletoes of various species are host plants for about sixteen species of butterflies in Australia mainly from two groups, the Jezebels and the Azures. For this reason it is important that they aren't completely eliminated from our forests.

One of the interesting things about the recent dry weather was noting the effect on mistletoes and the trees that support them. I keep track of various trees with mistletoes growing within easy reach of the ground in case other people want to know where to get berries of species they wish to grow.

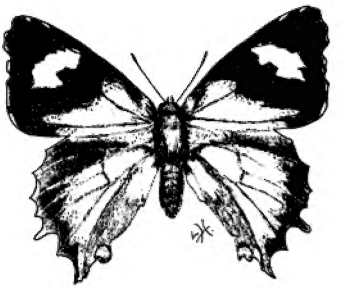


Northern Jezebel

Mostly the mistletoes have died where the conditions have gotten too dry, however, the host tree has survived. So in most cases the presence of a mistletoe does not

create enough extra stress to kill its host tree.

However one area of concern is large isolated trees. They already have an increased chance of "die-back". They sometimes become heavily infested with mistletoes and there is concern about whether this may kill the tree.



Northern Purple Azure (*Ogyris zozine*).

One Bushcare group based at Yugarapul Park has a large Eucalypt covered in mistletoe and they have asked the club if butterflies could be used to reduce the amount of mistletoe on the tree.

This would be quite experimental as, at this stage, very little has been done in this area apart from the system that Murdoch de Baar has developed for the Northern Purple Azure (*Ogyris zozine*). Members lucky enough to have attended the excursion to his garden will remember the spectacular migration of caterpillars and ants up to the mistletoe, after sunset.

There are many possibilities. I think it would be better to concentrate on the Azures rather than the Jezebels. While the Jezebels are able to eat a large quantity of mistletoe in a short period they feed during the day when mistletoe birds are active. A member of the audience at one of my butterfly talks had seen this bird eating Jezebel larvae and pupa. While they are probably toxic to other birds this would be a problem as a large number of mistletoes on a tree may indicate a resident mistletoe bird.

Firstly, we will try to get an idea of which ant, mistletoe and butterfly species are already present. From there we will work out the most promising options. If you wish to be involved or have any useful knowledge in the area, you are welcome to contact me and join in on this adventure.

Frank Jordan

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Legalise the Birdwing Butterfly

One of the questions I am frequently asked when I give butterfly talks is “where can I get caterpillars for my birdwing vines?” Usually the person has one or many thriving vines but have never seen the Richmond Birdwing Butterfly (*Ornithoptera richmondia*). Sadly I inform them that they are prevented by law from obtaining and transporting caterpillars to their vine or even bringing them inside to watch their development.

The legal restrictions concerning this species are proving to be very counter-productive to the conservation of the Richmond Birdwing and greater community

involvement is being thwarted. It's time that the Richmond Birdwing (and also the very common Cairns Birdwing (*Ornithoptera priamus*)) are taken off the protected list. There is no scientific reason for their listing at present. The government resources directed at their "protection" should be directed to much more needy species.

After discussion at the last club executive meeting it was decided to write a letter to the Queensland Premier to ask that the birdwing butterflies be removed from the schedule of protected species. We will keep our readers informed of developments.

Frank Jordan

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The Columbus Hypothesis

The Monarch butterfly (*Danaus plexippus*) is a familiar sight in Australia these days but it wasn't always so. Many people have provided explanations of how this butterfly got here from its original home, and the most interesting and plausible is known as the Columbus Hypothesis. It not only deals with the nineteenth century expansion of the Monarch butterfly but also links this to its spectacular migration in North America and the massive over-wintering sites in Mexico.

However let's start with the least plausible. This explanation notes the development of fast merchant shipping in the relevant time period and assumes that adult Monarchs merely stowed away in the holds and emerged at the destination.

The first problem with this is that the expansion of the Monarch seems to have run out of steam at the beginning of the twentieth century. Africa, India and other major parts of Asia were not colonised and, in some places where the Monarchs had been recorded such as the Philippines, it is now absent. There are many more and faster ships today so there should be even more stowaways.

The Monarch butterfly (*Danaus plexippus*)

Secondly, the colonisation did not follow the main trading routes. Records for Europe or Australia should have preceded records from islands such as the Azores, Marquesas or Carolines.

The Columbus Hypothesis points out that the nineteenth century saw massive land clearing in North America and this resulted in an explosion of the amount of milkweeds which benefited from this disturbance. This allowed the Monarchs to build up very large populations.

With the coming of autumn vast numbers of butterflies would have been flying east, west and south. Those that

stumbled on safe refuges could return to breed in spring but each year millions would fly out over the oceans never to return. Interestingly, it is around the late 1800's when the first observations of massive over-wintering colonies of Monarchs are recorded. While the famous Mexican sites were not recorded until the 1970's, colonies in Florida and California were recorded in the late 1800's.

Slowly most of the Monarchs were programmed, by natural selection, to find over-wintering sites and the massive migrations over the oceans ceased. Monarchs in Australia do not follow north/south migrations that evolved in America **after** our original colonists had already left.

Accordingly, both the famous over-wintering sites in Mexico and the migration of Monarchs to Australia could be the result of man-made deforestation of North America in the nineteenth century.

An interesting sideline to this is the presence of white Monarchs amongst the original colonists from America. These white Monarchs occasionally turn up in America and are the result of a recessive gene. Both parents need to have the gene and the offspring won't be white unless it has two copies of the gene. White Monarchs are well known from Hawaii with one collected from as far back as the 1890's. This gene is present in the Australian population of Monarchs and occasionally surfaces. Murdoch De Baar recorded one specimen in Brisbane in 1980.

Many people may be sceptical that butterflies could cover such large distances but even our local Blue Tiger makes it across to New Zealand from time to time. These are unable to establish because they lack a local host plant. The Monarch was able to establish here because its host plants had arrived before it.

This raises a difficult problem. Some local councils have declared these introduced milkweeds or silkpods to be noxious weeds which must be removed. If all Councils did this then the Monarch would become extinct in Australia. This would be a pity after all the effort the Monarch made to get here in the first place. Maybe one day the Monarch will learn to use one of our native plants or perhaps we will all have to start growing Stapelia, an African succulent used by the Monarch in Western Australia.

This very brief summary hardly does justice to the Columbus hypothesis. If you are interested in the more complete version, it appears in the book Biology and Conservation of the Monarch Butterfly, edited by Malcolm and Zalucki, published in 1993 by the Natural History Museum of Los Angeles County (No. 38 science series). It was written by Richard I Vane-Wright.

Frank Jordan

REQUESTS

Martyn Robinson (martynr@austmus.gov.au) is putting together an article for the newsletter on the possible change in status of the Common Crow (*Euploea core corinna*) in Sydney. Has it changed from a rare summer visitor to a year round resident? If anyone has any information on this species in NSW, and particularly in Sydney, could they please contact him with the details? Unfortunately Gowings Law will probably apply here - it states that the numbers of a species in museum collections is inversely proportional to its numbers in the field ie. if it's rare there'll be stacks in the museum but if it is common, or becomes so, no-one bothers to collect it - hence the recollections of butterfly enthusiasts may well help out here!

Martyn was also wondering whether members in Qld could keep their eyes open for holoptiline assassin bugs? They are to be found under the bark of trees which have large numbers of small ants trailing up and down the trunk. Some will have feathery tufts on their last pair of legs others will not. These bugs are useful to the museum dead but even more so as live specimens as we're interested in the secretions they all seem to give off. Bugs can be packed into a perforated film cannister (tape the lid on so it doesn't pop off in transit) with a piece of bark or tissue wedged in somehow so it can hold on to something and post in to the Australian Museum, 6 College St, Sydney NSW 2010.
They are not harmful insects.

Martyn Robinson

PHOTOGRAPHIC COMPETITION

The aim of this competition is to find the best wildlife picture taken by a photographer (worldwide) and to inspire photographers to visionary and expressive interpretations of nature. **COULD YOU BE THE PHOTOGRAPHER THEY ARE LOOKING FOR?** If so, why not enter a photograph into the BG Wildlife Photographer of the Year Exhibition. I have entry forms for the 2003 competition in my office, if you would like one. Hurry, entries close 2 April.
"Come on Aussie, come on", give it a go. **Yvonne Webster**
yvonnew@austmus.gov.au Australian Museum, 6 College St, Sydney NSW 2010.

A POEM BY FELIX

As our featured creature this issue is the Richmond Birdwing butterfly, I thought it fitting to include the following poem by one of our members, **Felix Jenkins**

THE LORD OF THE WINGS

I sat in my garden admiring the flowers
A pleasant way to wile away the hours.
When from a tree above a vision arrives
Shining green and gold, graceful it glides.
A Birdwing Butterfly, Lord of the Wings
To gladden my eyes, my heart how it sings.

Iridescent green and gold it poises on a flower
All else fades from mind, its beauty has power.
Quiet in the sunlight, it's satisfying its needs.
Down from the treetops where it usually feeds.
I feel so privileged, it's a visit from a Lord
I'll replay it in my mind, whenever I'm bored.

I sit awhile to watch the wondrous scene
Leaving now only a memory, where it has been.
I wonder much how such beauty came to be
A tenor once sang "Only God can make a tree."
Butterflies are something else, with double lives
A caterpillar it crawled, like a jewel it now flies.

YOUR CLUB'S MEMBERSHIP DIRECTORY

In February, 2002 your Club's organising committee decided to start encouraging members to network with each other in their local areas, and across their areas of interest. To this end we have now produced a membership directory. Only those members who have given us their permission have been included in the directory.

If you would like to be in a future issue of the directory please email Daphne at bowden@itconnect.net.au or phone: 07 3396 6334

AVAILABLE FROM BOIC

Grow More Butterflies –
A selection of articles published in previous Newsletters $3.30 plus $1.10 postage

Butterfly Gardening –
A series of articles published in previous Newsletters $2.20 plus $1.10 postage

Butterfly Host Plants of SE Qld. and Nth. NSW –
A comprehensive list of host plants for this region $5.50 plus $1.10 postage

The Butterfly Alphabet Poster which shows all the letters of the alphabet and numerals 1-9 appearing in the wings of butterflies and moths. This poster can be viewed by visiting www.butterflyalphabet.com
Cost: Non-members $25 plus $5 postage Members $23 plus $5 postage

The Domino Poster - A guide for field, school or garden with 250 Australian butterfly illustrations in colour
Cost: Non-members $10 plus $1.10 postage Members $8 plus $1.10 postage

Lifecycles of the Swallowtail Butterflies of South East Queensland, compiled by the BOIC
Cost: Non-members $10 plus $5 postage Members $6 plus $5 postage

These items can be obtained from BOIC, PO Box 2113, Runcorn, 4113.
Would any of these be a gift idea??

WORLD WIDE WEB SITES TO WATCH

Environment Australia has recently published the National Butterfly Action Plan www.ea.gov.au/biodiversity/threatened/action/butterfly

BACK ISSUES

Back Issues of the Club Newsletter are available at a cost of $2 each plus postage (1-2 copies $1.10 - 3-6 copies - $1.50.)

ADS AND EXCHANGES

Sometimes you may have an oversupply of butterfly larvae and your food supply will not hold out. If this happens, contact Rob MacSloy - 07 3824 4348 - who operates the Register of Host Plants. He can put you in touch with prospective "foster parents'. Have **YOU** advised Rob of the host plants you have available?

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"The Laced Fritillary" a painting by Lois Hughes. Prints now available. 12 beautiful butterfly card designs also available now. Phone Lois on 3206 6229.

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In issue #20 we featured the Chequered Swallowtail and its hostplant *Cullen tenax.* Lois Hughes has quantities of *Cullen tenax* seeds available. Send a stamped addressed envelope to 163 West Mt. Cotton Road, Mt. Cotton, Qld. 4165

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As reviewed in the September Newsletter, Garry Sankowsky's excellent CD-ROM **"A Garden on the Wing - Attracting Birds and Butterflies to theGarden"** is now available. The cost is $71.50 including GST. The address if you are mailing your order is Zodiac Publications, P.O. Box 210, Tolga, Qld. 4882. or visit www.rainforestmagic.com

BUTTERFLY AND OTHER INVERTEBRATES CLUB PROGRAMME

Visit a club member's garden at Loganholme

When:	Sunday 23rd March, 2003 at 10am
Where:	Meet at "Butterfly Brilliance", 43 Cairns St., Loganholme. Use the Beenleigh – Redland Bay Rd. freeway exit.
What:	Anne is building a business supplying butterflies for weddings and special occasions. She has made several trips to the USA to learn about butterfly breeding.
Bring:	Morning tea for yourself or to share.
Contact:	Daphne 07 3396 6334 or email bowden@itconnect.net.au

Annual General Meeting

When:	Saturday, 12th April, 2003 at 2pm
Where:	Redlands IndigiScapes Centre, 17 Runnymede Road, Capalaba
What:	Short AGM followed by afternoon tea, a show and tell and walk through the native plant gardens
Contact:	Daphne 07 3396 6334 or email bowden@itconnect.net.au

Planning and Management Meeting

What:	Our planning meetings are informative and interesting. As well as planning our activities we share lots of information. All members are welcome.
When:	Wednesday 14th May, 2003 at 7.30pm
Where:	John Moss' home
Contact:	Daphne for details on 07 3396 6334

Runcorn Wetlands Visit

When:	Sunday, 25th May, 2003 at 10am
Where:	Meet at Yugarupul Park, at the south end of Jacinda St., Sunnybank (2000ed. UBD Map 201 Ref B19)
What:	Runcorn Wetlands is home to Australia's smallest crayfish and one of Australia's largest dragonflies. We'll be visiting two sites where our Club is involved with enrichment plantings of *Gahnia clarkei* (Swordsedge or "Swordgrass") for the Swordgrass Brown butterfly and *Hygrophila angustifolia* (Karamat) for the Tiny Grass Blue and the Chocolate Argus (or Brown Soldier). Both these species have reduced their range in the SE Qld and Brisbane areas.
Bring:	Morning Tea and/or lunch for yourself, or to share. Sunscreen and insect repellant may also be useful.
Contact:	Daphne 07 3396 6334 or email bowden@itconnect.net.au

Our Winter Programme commences

When:	Thursday, 26th June, 7.30-9.30pm
Where:	Redlands IndigiScapes Centre, 17 Runnymede Road, Capalaba
What:	Slides – Mistletoes and other butterfly host plants. Show and tell.
Contact:	Daphne 07 3396 6334 or email bowden@itconnect.net.au

If you plan to attend any of the above events please contact the person indicated in case, for some unforeseen circumstance, the event has had to be postponed or cancelled.

DISCLAIMER

The Newsletter seeks to be as scientifically accurate as possible but the views, opinions and observations expressed are those of the authors. The Newsletter is merely a platform for people to express their views and are not necessarily those of the BOIC. If inaccuracies have inadvertently occurred and are brought to our attention we will seek to correct them in future editions. The Editor reserves the right to refuse to print any matter which is unsuitable, inappropriate or objectionable and to make nomenclature changes as appropriate.

ACKNOWLEDGMENTS

Producing this newsletter is done with to the efforts of:

- Those members who have sent in letters and articles
- Lois Hughes who provides illustrations including the cover
- Daphne Bowden who works on layout, production and distribution
- John Moss for scientific referencing and proof reading
- Helen Schwencke who developed the overall design

We would like to thank all these people for their contribution

ARE YOU A MEMBER

Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible.
Membership fees are $12.00 for Individuals/Schools and $17.00 for family membership.
Would you please advise bowden@itconnect.net.au if you get/change an email address.

Butterfly and Other Invertebrates Club Inc.
c/- PO Box 2113
RUNCORN Q. 4113

Next Meeting: Visit a club member's garden at Loganholme on Sunday 23rd March (see programme). Also don't forget the AGM on Saturday, 12th April, 2003 at 2pm